VI. Billing Test Section

A. Overview

The purpose of this section is to define the specific billing tests to be undertaken in evaluating the systems and related operational elements associated with BellSouth's establishment and maintenance of business with CLECs.

B. Scope

The billing domain test scope is defined in the following table: The table identifies the test target, the interface under test, the primary test objective(s), the BST product offering, and the test technique(s) to be employed.

Test Cycles	*Test Dimensions*			
	Interface	*Primary Test Objective*	*Product Category*	*Test Technique*
BLG-1: CRIS/CABS Invoicing Functional Test	CRIS CABS	Functionality, Quality	UNE	Transaction Processing, Inspection, Interview
BLG-2: ODUF/ADUF Usage Functional Test	ODUF ADUF	Functionality, Quality	UNE	Transaction Processing, Inspections, interviews
BLG-3 Billing Systems ~~CRIS/CABS Invoicing~~ Capacity Management Evaluation	CRIS CABS ADUF ODUF	Processing Capacity	UNE	Inspection, Interview
~~BLG-4: ODUF/ADUF Capacity Management Evaluation~~	~~ODUF~~ ~~ADUF~~	~~Processing Capacity~~	~~UNE~~	~~Inspection, Interview~~
BLG-~~5~~4: Billing Performance Results Comparison	CRIS CABS ODUF ADUF	Performance Reporting Verification	UNE	Performance Comparison, Inspection, Interview

Test Cycles	Test Dimensions			
	Interface	Primary Test Objective	Product Category	Test Technique
BLG-~~6~~5: CRIS/CABS Invoicing Documentation Evaluation	CRIS CABS	Documentation	UNE	Document Review, Interview
BLG-~~7~~6: ODUF/ADUF Documentation Evaluation	ODUF ADUF	Documentation	UNE	Document Review, Interview

Figure VI-I: Billing Test Cycles

C. Test Cycles

1.0 BLG-1: CRIS/CABS Invoicing Functional Test

1.1 Description

The CRIS/CABS Invoicing Functional Test will evaluate the functional elements of the carrier invoicing process for UNEs as delivered to CLECs by the CRIS/CABS interface. The test consists of a transaction driven segment and a process evaluation segment.

For the transaction driven segment, BST will establish an initial billing test bed consisting of activated retail accounts, and additional facilities reserved for subsequent use by the Test Manager in simulation of a CLEC. The billing test bed will support multiple OCNs and accounts will span several billing cycle dates for both CRIS and CABS. The Test Manager will submit service orders against the test bed. These orders will include new installs, migrations to the CLEC, changes and disconnects. Specific orders will be selected from the scenarios shown in **Appendix B-4: Billing Scenarios**. Calls will be placed on provisioned lines to generate usage. The service orders and usage will result in invoice detail subject to evaluation by the Test Manager. The functional elements of UNE invoicing to be specifically targeted by this test include usage and measured rate billing, recurring and non-recurring charges, pro-ration of charges, recording of account configuration changes, adjustments, and accuracy of invoice line-item details and summary level sections delivered by both the CABS/CRIS systems.

BLG-1 transaction testing activities and findings will be coordinated with the BLG-2 (Usage), BLG-5 (Performance) and BLG-6 (Documentation) tests.

The process oriented sub-tests are designed to ensure that BST internal procedures for producing and distributing customer bills are such that quality and timeliness are ensured.

Inspections of the relevant processes and interviews with responsible BST parties will be conducted.

1.2 Objective

The objective of the CRIS/CABS Invoicing Functional Test is to validate the completeness and accuracy of the CRIS/CABS carrier billing and invoicing process in accordance with BellSouth's published specifications.

1.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Detailed Billing guidelines obtained from BellSouth.
- Billing invoice delivery mechanisms established.
- Test scenarios and cases provisioned.
- Test-bed databases, including all required previously provisioned accounts in the CRIS/CABS and other related systems loaded for Billing.
- Performance measurement tracking systems prepared to track test transactions.
- Test case execution scheduled.
- Detailed test cycle checklist created.
- Test logs and validation instructions created and results reporting template completed.
- Test execution team identified, scheduled, and trained.
- Documentation of BST bill production and distribution procedures obtained.
- Interview guide/questionnaire developed.
- Interviewees identified and scheduled.
- Test Plan and evaluation criteria defined and approved.

1.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate CRIS/CABS functionality.

Objective: Functionality *Test Technique: Transaction Processing*	
Sub Process	***Function***
Adjustment	Enter adjustments.
	Track adjustments.
Maintain Bill Balance	Carry balance forward.
Review Bills	Verify normal recurring charges.
	Verify one-time charges.
	Verify prorated recurring charges.
	Verify usage charges.
	Verify adjustments (debits and credits).
	Verify late charges.
Balance Cycle	Define balancing and reconciliation procedures.
	Produce control reports.
	Release cycle.
Deliver Bill	Deliver bill media.
Maintain Bill History	Maintain billing information.
	Access billing information.
Request resend	Deliver bill media.

Figure VI-II: CRIS/CABS Invoicing Functional Test Scope

1.5 Test Activities

1. Review BellSouth Billing documentation.
2. Using test cases derived from the test scenarios found in Appendix B, perform each function listed in the test scope.
3. Assess accuracy of each system function as documented.
4. After executing orders, receive and validate the bills.
5. Capture results.
6. Compare actual results with the expected results and tabulate findings.
7. Interview BellSouth Subject Matter Experts to ensure quality of internal processes.
8. Resolve exceptions.

1.6 Exit Criteria

- Global Exit Criteria satisfied.
- Expected results versus actual test case results reported.
- Confirmation steps completed.
- Test report generated.
- Exit review completed.

2.0 BLG-2: ODUF/ADUF Usage Functional Test

2.1 Description

The Daily Usage File (DUF) Test will evaluate the functional elements of daily message/usage processing for UNE ports as delivered to CLECs by the ADUF/ODUF interfaces. This test ~~cycle~~ will be executed by placing test calls on ~~those~~ UNE port or loop port scenarios similar to those selected for provisioning as part of the EDI/TAG functional tests (O&P-1 and O&P-2). The functional elements of daily message/usage processing for UNE ports to be specifically targeted by this test include the completeness and accuracy of the call details across a variety of incoming and outgoing call types, changes in account disposition/configuration, and CO switch types.

The message/usage processing test ~~cycle~~ will require BellSouth to establish an initial test bed of billed accounts prior to the execution of the Billing ~~O&P~~ functional tests. ~~in order~~

~~to generate BellSouth retail customer usage.~~ This test will ~~take place across two billing cycles in order to~~ capture daily usage events that can be compared to the carrier invoices delivered via the CRIS/CABS interfaces. The test consists of a transaction driven segment and a process evaluation segment.

For the transaction driven segment, BST will establish an initial billing test bed consisting of activated retail accounts, and additional facilities reserved for subsequent use by the Test Manager in simulation of a CLEC. The Billing test bed will support multiple OCNs and accounts will span several billing cycle dates for both CRIS and CABS. The Test Manager will submit service orders against the test bed. These orders will include new installs, migrations to the CLEC, changes and disconnects. Specific orders will be selected from the scenarios shown in **Appendix B-4: Billing Scenarios**. Calls will be placed on provisioned lines to generate usage. The calls will consist of multiple call types and will be placed in multiple venues. The usage will result in DUF detail subject to evaluation by the Test Manager.

BLG-2 transaction testing activities and findings will be coordinated with the BLG-1 (Invoicing), BLG-5 (Performance) and BLG-7 (Documentation) tests.

The process oriented sub-tests are designed to ensure that BST internal procedures for producing and distributing daily usage files are such that quality and timeliness are ensured. Inspections of the relevant processes and interviews with responsible BST parties will be conducted.

2.2 Objective

The objective of the ODUF/ADUF Usage functional test is to assess the accuracy, completeness and timeliness of the daily usage file message processing capability as described in BellSouth's published specifications.

2.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Detailed Billing guidelines obtained from BellSouth.
- Billing usage data delivery mechanisms established.
- Test scenarios and cases provisioned.
- Testbed provisioned.
- Performance measurement tracking systems prepared to track test transactions.
- Test case execution scheduled.

- Detailed test cycle checklist created.
- Test logs created and results reporting template completed.
- Test execution team identified, trained and scheduled.
- Documentation of BST DUF production and distribution procedures available.
- Interview guide/questionnaire developed.
- Interviewees identified and scheduled.
- Test Plan and evaluation criteria defined and approved.

2.4 Test Scope

Objective: Functionality ***Test Technique: Transaction Processing***	
Sub-Process	***Function***
Receipt of Usage by BellSouth	Receive switch records at data center.
	Verify DUF data.
Daily Usage Feed	Create usage feed.
	Define balancing and reconciliation procedures.
	Route usage.
Deliver Usage to CLECs	Send direct connect.
	Acknowledge arrival.
Maintain Usage History	Create usage backup.
	Request backup data.
Status Tracking and Reporting	Track valid usage.
	Account for no usage.
	Account for missing usage (gaps).

Figure VI-IV: ODUF/ADUF Usage Functional Test

2.5 Test Activities

1. Review BellSouth billing documentation.
2. Using test cases derived from the test scenarios found in Appendix B perform each function listed in the test scope.
3. Assess accuracy of each system function as documented.
4. Capture results.
5. Compare actual results with expected results and tabulate findings.
6. Interview BellSouth Subject Matter Experts to ensure quality of internal processes.
7. Resolve exceptions.

2.6 Exit Criteria

- Global Exit Criteria satisfied.
- Expected results versus actual test case results reported.
- Confirmation steps completed.
- Call Logs completed.
- Test Report generated.
- Exit review completed.

3.0 BLG-3: ~~CRIS/CABS Invoicing~~Billing Systems Capacity Management Evaluation

3.1 Description

The ~~CRIS/CABS Invoicing~~Billing Systems Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of ~~CRIS/CABS~~billing applications for bill generation and invoicing.

3.2 Objective

The objective of this evaluation is to determine the extent to which procedures to accommodate increases in ~~CRIS/CABS invoicing~~billing transaction volumes and users are being actively managed.

3.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.
- Interview guide / questionnaire developed.
- Interviewees identified and scheduled.
- Detailed evaluation checklists developed.
- Test Plan and evaluation criteria defined and approved.

3.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ~~CRIS/CABS~~billing systems capacity management.

Objective: Capacity Management ***Test Technique: Inspection and Interview***	
Sub-Process	***Function***
~~CRIS/CABS~~Billing Systems Capacity Management	Data collection and reporting of business volumes, resource utilization, and performance monitoring~~Evaluate business volume tracking and forecasting~~
	Data verification and analysis of business volumes, resource utilization, and performance monitoring~~Evaluate resource usage tracking and forecasting~~
	Systems and capacity planning.~~Evaluate performance management processes~~

Figure IX-VI: ~~CRIS/CABS~~Billing Systems Capacity Management Evaluation Test Scope

3.5 Test Activities

Interviews will be conducted with system administration personnel responsible for the operation of ~~CRIS/CABS invoicing~~the billing systems. These interviews will be supplemented with an analysis of BellSouth capacity management procedures as well as evidence of related activities such as: periodic capacity management reviews; system reconfiguration/load balancing; and, load increase induced upgrades.

1. Review procedural and other documentation related to ~~CRIS/CABS~~billing systems capacity management.
2. Conduct interviews with key systems administration and support personnel as appropriate.
3. Document findings.

3.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation reviews completed.
- Interviews completed.
- Summary findings and conclusions.
- Exit review completed.

~~*4.0 BLG-4: ODUF/ADUF Daily Usage Capacity Management Evaluation*~~

~~4.1 Description~~

~~The ODUF/ADUF capacity management evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of ODUF/ADUF interfaces.~~

~~4.2 Objective~~

~~The objective of the ODUF/ADUF Invoicing Capacity Management Evaluation is to analyze the capabilities of BST capacity management functions in relation to the ODUF/ADUF applications and associated billing workforce, and determine whether the procedures are adequate to identify and implement capacity increments to satisfy customer business volumes on a timely basis.~~

4.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.
- Interview Guide / Questionnaire developed.
- Interviewees identified and scheduled.
- Detailed evaluation checklists developed.
- Test Plan and evaluation criteria defined and approved.

4.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ODUF/ADUF capacity management.

Objective: Capacity Management *Test Technique: Inspection and Interview*	
Sub-Process	***Function***
ODUF/ADUF Capacity Management	Evaluate business volume tracking and forecasting
	Evaluate resource usage tracking and forecasting
	Evaluate performance management processes

Figure IX-VII: ODUF/ADUF Daily Usage Capacity Management Evaluation

4.5 Test Activities

1. Review procedural and other documentation related to ODUF/ADUF capacity management.
2. Conduct interviews with key systems administration and support personnel as appropriate.
3. Document findings.
4. Resolve exceptions

~~4.6 Exit Criteria~~

- ~~Global Exit Criteria satisfied.~~
- ~~Documentation reviews complete.~~
- ~~Interviews completed.~~
- ~~Capacity management review report completed.~~
- ~~Exit review completed.~~

~~4~~5.0 *BLG-~~4~~5: Billing Performance Results Comparison*

~~4~~5.1 Description

The Billing Performance Results Comparison is a comparative analysis of billing performance results collected by KPMG through test management tools and by BellSouth's OSS performance measurement system. The source results collected from BLG-1: CRIS/CABS Invoicing Functional Test and BLG-2: ODUF/ADUF Usage Functional Test will be compared to BellSouth's performance results, accuracy and trends will be identified, and disparities will be analyzed for significance. Overall, for consistency testing, four test results sources will be used and compared to ensure BellSouth accuracy:

- Daily usage files ODUF/ADUF
- CRIS/CABS test invoices
- BellSouth's performance measurement system data collected
- Test Call Log.

~~4~~5.2 Objective

The objective of the Billing Performance Results Comparison is to assess the accuracy of BellSouth's wholesale performance metrics results using test transactions.

~~4~~5.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Detailed billing guidelines received from BellSouth.
- Test execution team identified, trained, and scheduled.

- Test scenarios in BLG-1 and BLG-2 completed.
- Test Plan and evaluation criteria defined and approved.

45.4 Test Scope

The test scope will address the following sub-processes and functions to compare performance results.

Objective: Performance *Test Technique: Performance Comparison*	
Sub-Process	***Function***
Invoicing Accuracy	CRIS and CABS bills.
Invoice Timeliness	CRIS and CABS bills.
Usage Data Delivery Timeliness	Port Usage.
Usage Data Delivery Completeness	Port Usage .
Usage Data Delivery Accuracy	Port Usage.

Figure VI-VIII: Billing Performance Results Comparison

45.5 Test Activities

1. Acquire and format BellSouth performance data files.
2. Compare disaggregated BellSouth performance results with actual performance results.
3. Flag any unexplained variance in results comparison and determine next steps in execution and resolution process.
4. Log any unexplained variance in exceptions reporting template.
5. Resume results comparison and validation analysis.
6. Generate comparative analysis results reports.

45.6 Exit Criteria

- Global Exit Criteria satisfied.
- Comparative analysis report completed.
- Results variance findings documented.
- Exceptions report completed.
- Test cycle results summary report created.
- Work papers finalized.
- Exit review completed.

56.0 *BLG-56: CRIS/CABS Invoicing Documentation Evaluation*

56.1 Description

The CRIS/CABS Invoicing Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interact with BellSouth's invoicing systems when conducting billing activities. This evaluation is intended to review the availability, accuracy and completeness of BellSouth's invoicing systems documentation using a variety of operational analysis techniques. Since there is no direct system interaction with CRIS/CABS, this documentation evaluation will be concerned with analyzing the accuracy of documentation pertaining to connectivity to gather invoices; delivery of invoices; and the overall format and contents of the invoices delivered.

56.2 Objective

The objective of CRIS/CABS Invoicing Documentation Evaluation is to assess whether the documentation provided by BellSouth adequately assists CLECs in understanding how to interact with BellSouth's billing function.

56.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Detailed billing guidelines documentation obtained.
- Teams staffed, scheduled, and trained.
- ~~Billing scenarios in BLG-1 and BLG-2 completed.~~

- Documentation evaluation checklists completed.
- Interview guide/questionnaire(s) completed.
- Interviewees identified and scheduled.
- ~~Incident reports due to documentation from BLG-1 and BLG-2 received.~~
- ~~BellSouth and CLEC documentation order specialist and user contact information obtained.~~
- Process for logging incidents identified and accepted.
- Test Plan and evaluation criteria defined and approved.

56.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate CRIS/CABS documentation along with additional relevant information identified during the test.

Objective: Documentation ***Test Technique: Document Review and Observation***	
Sub-Process	***Function***
Billing Invoicing Documentation	Document change management.
	Document content management.
	Documentation distribution.
	Document content.

Figure VI-IX: CRIS/CABS Invoicing Document Review Test Scope

56.5 Test Activities

1. Obtain relevant documentation needed to carry out business processes related to billing/invoicing.
2. Conduct documentation evaluation using documentation evaluation checklist.

3. Conduct interviews with BellSouth documentation specialists.
4. Conduct interviews with CLEC documentation users.
5. Log incidents noted during testing.
6. Compile results.
7. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.

56.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.
- Exception report(s) completed.
- Summary evaluation report completed.
- Exit review completed.

67.0 *BLG-67: ODUF/ADUF Documentation Evaluation*

67.1 Description

The ODUF/ADUF Documentation Evaluation is an analysis of the BellSouth documentation used by CLECs to interact with BellSouth's usage reporting systems when conducting billing activities. This evaluation is intended to review the availability, accuracy and completeness of BellSouth's documentation using a variety of operational analysis techniques. Since there is no direct system interaction with BellSouth's systems in this process, this documentation evaluation will be concerned with analyzing the accuracy of documentation pertaining to connectivity to gather usage records; delivery of usage records; and the overall format and contents of the daily usage files delivered.

67.2 Objective

The objective of ODUF/ADUF Documentation Evaluation is to assess whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the ODUF/ADUF functions available to them.

67.3 Entrance Criteria

- Global Entrance Criteria satisfied.

- Detailed billing guidelines received from BellSouth.
- Teams staffed, scheduled, and trained.
- ~~Billing scenarios in BLG-1 and BLG-2 completed.~~
- Documentation evaluation checklists completed.
- Interview guide/questionnaire(s) completed.
- Interviewees identified and scheduled.

~~Exception reports due to documentation from BLG-1 and BLG-2 received.~~

- ~~BellSouth and CLEC documentation order specialist and user contact information obtained.~~
- Process for logging incidents identified and accepted.
- Test Plan and evaluation criteria defined and approved.

~~6~~7.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ODUF/ADUF documentation along with relevant information identified during the test.

Objective: Documentation Test Technique: Document Review	
Sub-Process	***Function***
Billing Usage Reporting Documentation	Document change management.
	Document content management.
	Documentation distribution.
	Document content.

Figure VI-X: ODUF/ADUF Usage Document Evaluation

67.5 Test Activities

1. Obtain relevant documentation needed to carry out business processes related to Billing/Usage reporting.
2. Conduct documentation evaluation using documentation evaluation checklist.
3. Conduct interviews with BellSouth documentation specialists.
4. Conduct interviews with CLEC documentation users.
5. Log incidents noted during testing.
6. Compile results.
7. Flag any exceptions or mismatched responses and determine next steps in the execution and resolution process.

67.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.
- Exception report(s) completed.
- Summary evaluation report completed.
- Exit review completed.

VII. Maintenance and Repair Test Section

A. Overview

The purpose of this section is to define the specific maintenance and repair tests to be undertaken in evaluating the systems and related operational elements associated with BellSouth's maintenance of business with CLECs.

B. Scope

The maintenance and repair test scope is defined in the following table. The table identifies the test target, the interface under test, the primary test objective(s), the BST product offering, and the test technique(s) to be employed.

Test Cycle	*Test Dimensions*			
	Interface	*Primary Test Objective*	*Product Category*	*Test Technique*
M&R-1: TAFI Functional Test	TAFI	Functionality	UNE	Transaction Processing
M&R-2: ECTA Functional Test	ECTA	Functionality	UNE	Transaction Processing
M&R-3: ECTA Normal Volume Performance Test	ECTA	Volume Performance	Resale UNE	Transaction Processing
M&R-4: ECTA Peak Volume Performance Test	ECTA	Volume Performance	Resale UNE	Transaction Processing
M&R-5: TAFI Capacity Management Evaluation	TAFI	Processing Capacity	Resale UNE	Inspection Interview
M&R-6: ECTA Capacity Management Evaluation	ECTA	Processing Capacity	Resale UNE	Inspection Interview
M&R-7: M&R Performance Results Comparison	TAFI/ ECTA	Performance Reporting	Resale UNE	Performance Comparison, Inspection Interview
M&R-8: TAFI Documentation	TAFI	Documentation	Resale	Document

Test Cycle	Test Dimensions			
	Interface	Primary Test Objective	Product Category	Test Technique
Evaluation			UNE	Review Interview
M&R-9: ECTA Documentation Evaluation	ECTA	Documentation	Resale UNE	Document Review Interview
M&R-10: M&R Process Evaluation	TAFI ECTA	Performance	Resale UNE	Document Review Inspection Interview

Note: Since TAFI is in large volume production in BellSouth's retail environment, no volume or peak tests are planned.

Figure VII-I: Maintenance & Repair Test Cycles

C. Test Cycles

1.0 M&R-1: TAFI Functional Test

1.1 Description

The TAFI Functional Test will evaluate the functional elements of the trouble reporting and screening process for telephone number assigned UNEs, as delivered to CLECs via the TAFI interface in BellSouth's production environment. This test cycle will be executed by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts.

The functional elements of TN-based UNE trouble reporting and screening to be specifically targeted by this test include the entry and resolution of trouble reports, query and receipt of status reports, access to test capabilities, access to trouble history, and error conditions.

TAFI functionality will be reviewed along with the documentation addressing its use. BellSouth will be required to identify or establish a test bed of TN-based UNE customer accounts for the purpose of this test.

The Test Manager will coordinate with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track test transaction performance prior to beginning the test.

1.2 Objective

The objective of the TAFI Functional Test is to validate the existence of TAFI trouble reporting and screening functionality for telephone number-assigned UNE customers in accordance with the CLEC TAFI End User Training and User Guide.

1.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- CLEC TAFI End-User Training and User Guide obtained.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.
- BellSouth's test bed customer account data loaded and verified by Test Manager.
- Expected results files and test logs completed.
- Test management tools installed and fully configured with test account data.
- TAFI account and security access tools established.
- TAFI terminal stations established and configured.
- TAFI connectivity established.
- Test execution team identified, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.

1.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAFI functionality.

Objective: Functionality, Documentation, Interface Test Technique: Transaction Processing	
Sub-Process	***Function***
Trouble Reports	Create trouble report.

Objective: Functionality, Documentation, Interface *Test Technique: Transaction Processing*	
Sub-Process	***Function***
	Modify trouble report.
	Create repeat report.
	Create subsequent report.
	Retrieve LMOS recent status report.
	Execute manual queuing capabilities
	Execute supervisor functions
Access to Test Capability	Initiate port and loop-port test.
	View port and loop-port test results.
	Obtain customer line record.
	Obtain predictor results.
	View DLR (Display Line Record).
	View SOCS pending order (open issue).
	Close trouble report.
	Cancel trouble report.
Access Error Reports	Reset communications.
	Host request errors.
Trouble History	Retrieve trouble history.
Trouble Status	View pending ticket status.

Figure VII-II: TAFI Functional Test Scope

1.5 Test Activities

1. Review detailed test cycle checklist to ensure that all activities are addressed.

2. Assign TAFI Ids and assign terminals for testing.
3. Submit TAFI test case transactions according to schedule.
4. Log transaction identifier(s) and submission date/time stamp.
5. Receive transaction responses.
6. Log transaction identifier(s) and receipt date/time stamp.
7. Verify that transaction response contains expected results.
8. Analyze timeliness performance.
9. Flag any exceptions or mismatched responses and determine next steps in exception process.
10. Generate test results report.

1.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

2.0 M&R-2: ECTA Functional Test

2.1 Description

The ECTA Functional Test will evaluate the functional elements of the trouble reporting and screening process for both telephone number assigned and circuit identified UNEs as delivered to CLECs via the ECTA interface. This test cycle will be executed by exercising a defined set of ECTA functions associated with trouble management activities against test bed accounts.

The functional elements of TN-based and circuit identified UNE trouble reporting and screening to be targeted by this test include the entry and resolution of trouble reports, the query and receipt of status reports, ~~access to test capabilities,~~ access to trouble reports, and error conditions. The ECTA Functional Test will be conducted against BellSouth's production environment system.

ECTA functionality will be reviewed in conjunction with the documentation addressing its use.

BellSouth will be required to identify or establish a test bed of existing TN-based and circuit-identified UNE customer accounts for the purpose of this test.

The Test Cycle Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

2.2 Objective

The objective of the ECTA Functional Test is to validate the existence of ECTA trouble reporting and screening functionality for both telephone number assigned and circuit identified UNE customers in accordance with BellSouth's published specifications.

2.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- ECTA documentation obtained.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.
- BellSouth's test bed customer account data loaded and verified by Test Manager.
- Expected results files and test logs completed.
- Test management tools installed and fully configured with test account data.
- ECTA account and security access tools established.
- ECTA terminals established and configured.
- ECTA connectivity established.
- Test execution team identified, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.

2.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA functionality.

Objective: Functionality *Test Technique: Transaction Processing*	
Sub-Process	***Function***
Trouble Reports	Create trouble report.
	Modify trouble report.
	Add trouble information.
	Cancel trouble report.
	Request trouble ticket status.
~~Trouble Status~~	Verify Repair Completion.

Figure VII-III: ECTA Functional Test Scope

2.5 Test Activities

1. Review detailed test cycle checklist to ensure that all activities are addressed.
2. Assign ECTA IDs and terminals for testing.
3. Submit ECTA test case transactions according to schedule.
4. Log transaction identifier(s) and submission date/time stamp.
5. Receive transaction responses.
6. Log transaction identifier(s) and receipt date/time stamp.
7. Verify that transaction response contains expected results.
8. Analyze timeliness performance.
9. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
10. Generate test results report.

2.6 Exit Criteria

- Global Exit Criteria satisfied.

- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

3.0 M&R-3: ECTA Normal Volume Performance Test

3.1 Description

The ECTA Normal Volume Performance Test will evaluate the behavior and performance of the ECTA interface under "normal" YE01 projected transaction load conditions. This test cycle will be executed by a test transaction generator capable of submitting large volumes of resale services and UNE trouble test cases in a manner consistent with ECTA's current and forecasted daily usage patterns and transaction mix, including error conditions.

~~The normal volume forecast will be developed across BellSouth's entire nine-state region as described in **Appendix C: Volume Analysis**.~~ BellSouth's estimates of YE01 trouble reports for ECTA will be used to calculate hourly transaction levels. The test will be executed during two ten-hour periods by modeling the expected normal daily usage (*e.g.*, the off-peak nighttime hour loads will be excluded for the test). Trouble transaction loads will be distributed geographically across multiple Georgia COs to more accurately reflect a realistic operating environment. BellSouth will ensure that customer test accounts are established and configured accordingly.

The Test Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

3.2 Objective

The objective of the ECTA Normal Volume Performance Test is to measure the performance of the ECTA interface under normal projected YE01 transaction loads.

3.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- M&R-2: ECTA Functional Test successfully completed.
- Test transaction tracking data elements identified.
- Normal volume level defined.

- BellSouth's and KPMG's performance measurement tracking systems prepared to track transactions.
- Successful certification testing for ECTA completed.
- Test Plan defined and approved.

3.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA normal performance.

Objective: Functionality, Volume Performance, and Interface Test Technique: Transaction Processing	
Sub-Process	***Function***
Submit Trouble Transactions in Projected Normal Volumes	Create trouble report.
	Modify trouble report.
	Add trouble information.
	Cancel trouble report.
	Request trouble ticket status.
	~~View trouble ticket notifications.~~Verify repair completion.

Figure VII-IV: ECTA Normal Volume Performance Test Scope

3.5 Test Activities

1. Submit ECTA test case transactions according to schedule.
2. Log transaction identifier(s) and critical performance responsiveness/time stamp information.
3. Verify that transaction responses meet expected results.
4. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
5. Perform volume responsiveness analysis.

6. Generate test results reports.

3.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

4.0 M&R-4: ECTA Peak Volume Performance Test

4.1 Description

The ECTA Peak Volume Performance Test will evaluate the behavior and performance of the ECTA interface under peak YE01 projected transaction load conditions. This test cycle will be run following the execution of the ECTA Normal Volume Performance Test (M&R-3) and will utilize a sample of resale services and UNE trouble test cases, including error conditions.

The peak volume forecast will be developed using the peak hourly load identified for the ECTA Normal Volume Performance Test and replicating those transaction volumes across an eight-hour period. Alternatively, ~~if BellSouth's normal daily usage patterns are relatively flat,~~ a multiple may be applied to the non-peak hourly load and the result replicated across an eight-hour day. The methodology and calculations are discussed further in **Appendix C: Volume Analysis**.

The peak volume test will be executed during two separate eight-hour periods. BellSouth will ensure that customer test accounts are established and configured accordingly. Trouble transaction loads will again be distributed geographically across multiple Georgia COs to more accurately reflect a realistic peak load operating environment.

The Test Cycle Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

4.2 Objective

The objective of the ECTA Peak Volume Performance Test is to measure the performance of the ECTA interface under peak projected YE01 transaction loads.

4.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- M&R-3: ECTA Normal Volume Test successfully completed.
- Test transaction tracking data elements identified.
- Peak level volume defined.
- BellSouth's and KPMG's performance measurements tracking systems prepared to track transactions.
- Successful certification testing for ECTA test tools completed.
- Test Plan defined and approved.

4.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA peak performance.

Objective: Functionality, Volume Performance, and Interface Test Technique: Transaction Processing	
Sub-Process	***Function***
Submit Trouble Transactions in Projected Peak Volumes	Create trouble report.
	Modify trouble report.
	Add trouble information.s
	Cancel trouble ticket.
	Request trouble ticket status.
	~~View trouble ticket status.~~Verify repair completion.

Figure VII-V: ECTA Peak Volume Performance Test Scope

4.5 Test Activities

1. Submit ECTA test case transactions according to schedule.
2. Log transaction identifier(s) and critical performance responsiveness/date/time stamp information.
3. Verify that transaction responses meet expected results.
4. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
5. Perform volume responsiveness analysis
6. Generate test results report.

4.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

5.0 M&R-5: TAFI Capacity Management Evaluation

5.1 Description

The TAFI Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of the TAFI interface.

5.2 Objective

The objective of this evaluation is to determine the extent to which procedures to accommodate increases in TAFI system transaction volumes and users are being actively managed.

5.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.

- Interview Guide / Questionnaire developed.
- Interviewees identified and scheduled.
- Detailed evaluation checklists developed.

5.4 Test Scope

The test scope will address the following sub-processes involved in evaluating the management processes and capabilities of BellSouth to support capacity changes in the TAFI process.

Objective: Capacity Management ***Test Technique: Inspection and Interview***	
Sub-Process	***Function***
TAFI Capacity Management	~~Evaluate business volume tracking and forecasting.~~ Data collection and reporting of business volumes, resource utilization, and performance monitoring.
	~~Evaluate resource usage tracking and forecasting.~~ Data verification and analysis of business volumes, resource utilization, and performance monitoring.
	~~Evaluate performance management processes.~~ Systems and capacity planning.
	~~Evaluate capacity management processes.~~

Figure VI-VI: TAFI Capacity Management Test Scope

5.5 Test Activities

The test scope will address the following sub-processes and functions to evaluate TAFI capacity management.

1. Review procedural and other documentation related to TAFI capacity management.
2. Conduct interviews with key systems administration and support personnel as appropriate.
3. Document findings.
4. Resolve exceptions.

5.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

6.0 M&R-6: ECTA Capacity Management Evaluation

6.1 Description

The ECTA Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of the ECTA interface.

6.2 Objective

The objective of this evaluation is to determine the extent to which procedures to accommodate increases in the ECTA system transaction volumes and users are being actively managed.

6.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.
- Interview Guide / Questionnaire developed.
- Interviewees identified and scheduled
- Detailed evaluation checklists developed.
- Test Plan and evaluation criteria defined and approved.

6.4 Test Scope

The test scope will address the following sub-processes involved in evaluating the management processes and capabilities of BellSouth to support capacity changes in the ECTA process.

Objective: Capacity Management *Test Technique: Inspection and Interview*	
Sub-Process	***Function***
ECTA Capacity Management	~~Evaluate business volume tracking and forecasting.~~ Data collection and reporting of business volumes, resource utilization, and performance monitoring.
	~~Evaluate resource usage tracking and forecasting.~~ Data verification and analysis of business volumes, resource utilization, and performance monitoring.
	~~Evaluate performance management processes.~~ System and capacity planning.
	~~Evaluate capacity management processes.~~

Figure VII-VII: ECTA Capacity Management Evaluation Test Scope

6.5 Test Activities

The test scope will address the following sub-processes and functions to evaluate ECTA capacity management.

1. Review procedural and other documentation related to ECTA capacity management.
2. Conduct interviews with key systems administration and support personnel as appropriate.
3. Document findings.
4. Resolve exceptions.

6.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

7.0 M&R-7: M&R Performance Results Comparison

7.1 Description

The M&R Performance Results Comparison is a comparative analysis of M&R performance results collected by KPMG test management tools and by BellSouth's OSS performance measurement system. The source results collected from M&R-1: TAFI Functional Test, M&R-2: ECTA Functional Test, M&R-3: ECTA Normal Volume Performance Test, and M&R-4: ECTA Peak Volume Performance Test will be compared to BellSouth's performance results; accuracy and trends will be identified; and disparities will be analyzed for significance.

7.2 Objective

The objective of the M&R Performance Results Comparison is to assess the accuracy of BellSouth's wholesale performance metrics results using Build test transactions.

7.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Results comparison strategy defined.
- Target M&R performance metrics identified.
- Keys required for BellSouth to separate Build transactions identified.
- TAFI/ECTA Functional Tests completed with disaggregated performance metrics reports (including raw data in electronic form).
- Functional tests will include faults where appropriate.
- ECTA Normal and Peak Volume Performance Tests completed with disaggregated performance metrics reports (including raw data in electronic form).
- Test execution scheduled.
- Test logs created and results reporting template completed.
- Test execution team staffed, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.
- Guidelines for measuring variances defined.

7.4 Test Scope

The test scope will address the following sub-processes and functions to compare performance results.

Objective: Performance *Test Technique: Performance Comparison*	
Sub-Process	***Function***
Missed Repair Appointment	UNE Designed.
	UNE Non-Designed.
Percentage of Subsequent Reports	UNE Designed.
	UNE Non-Designed.
Maintenance Average Duration	UNE Designed.
	UNE Non-Designed.
Out of Service > 24 Hours	UNE Designed.
	UNE Non-Designed.
Repeat Troubles within 30 Days	UNE Designed.
	UNE Non-Designed.
OSS Response Interval	UNE Designed.
	UNE Non-Designed.
Average Answer Time	UNE Designed.
	UNE Non-Designed.

Figure VII-VIII: M&R Performance Results Comparison Test Scope

7.5 Test Activities

1. Acquire and format BellSouth performance data files.
2. Compare disaggregated BellSouth performance results with Build performance results.

3. Flag any unexplained variance(s) in results comparison and determine next steps in exception and resolution process.
4. Generate comparative analysis results reports.

7.6 Exit Criteria

- Global Exit Criteria satisfied.
- Comparative analysis report completed.
- Results variance findings documented.
- Exception report completed.
- Test cycle results summary report completed.
- Exit review completed.

8.0 M&R-8: TAFI Documentation Evaluation

8.1 Description

The TAFI Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interface and interact with the TAFI interface for maintenance and repair activities. This evaluation is intended to review the availability, accuracy, and completeness of BellSouth's maintenance and repair documentation using a variety of operational analysis techniques. This test uses records of observations from M&R-1: TAFI Functional Test and CLEC TAFI End User Training Manuals to identify exceptions in documentation and functionality described in the business rules.

8.2 Objective

The objective of the TAFI Documentation Evaluation is to assess whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the TAFI functions available to them.

8.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- TAFI documentation obtained.
- Teams staffed, scheduled, and trained.
- Documentation evaluation checklists completed.

- Test Plan and evaluation criteria defined and approved.
- Interview guide/questionnaire developed.
- Interviewees identified and scheduled.
- Exception reports due to documentation from M&R 1: TAFI Functional Test obtained.
- BellSouth and CLEC documentation order specialist and user contact information obtained.
- Process for logging incidents defined and accepted.

8.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAFI documentation along with additional relevant information identified during the test.

Objective: Documentation ***Test Technique: Document Review and Interview***	
Sub-Process	***Function***
M&R Documentation	CLEC TAFI End-User Training and User Guide.
	CLEC Training Guide (M&R Sections).
	TAFI Online Help.
	Carrier Notifications on BellSouth's website.

Figure VII-IX: TAFI Documentation Evaluation Test Scope

8.5 Test Activities

1. Obtain relevant documentation needed to carry out business processes related to M&R.
2. Conduct documentation evaluation using documentation evaluation checklist.
3. Conduct interviews with BellSouth documentation specialists.
4. Conduct interviews with CLEC documentation users.
5. Log incidents noted during test.

6. Compile results.
7. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.

8.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.
- Exception report(s) completed.
- Summary evaluation report completed.
- Exit review completed.

9.0 M&R-9: ECTA Documentation Evaluation

9.1 Description

The ECTA Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interface and interact with the ECTA interface for maintenance and repair activities. This evaluation is intended to review the ~~availability,~~ accuracy, ease of use ~~and completeness~~ conformance to ANSI standards of BellSouth's maintenance and repair documentation using a variety of operational analysis techniques. This test will use records of observations from M&R-2: ECTA Functional Test and CLEC ECTA End User Joint Implementation Agreement (JIA) to identify ~~exceptions in~~ issues with documentation and functionality described in the business rules.

9.2 Objective

The objective of the ECTA Documentation Evaluation is to ~~assess~~ comment on whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the ECTA functions available to them.

9.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- ECTA documentation obtained.
- Teams staffed, scheduled and trained.
- Documentation evaluation checklist completed.

- Test Plan and ~~evaluation criteria~~ defined and approved.

~~Interview guide/questionnaire developed.~~

~~Interviewees identified and scheduled.~~

- ~~Exception reports~~Issues due to documentation from M&R-2: ECTA Functional Test obtained.

~~BellSouth and CLEC documentation order specialist and user contact information obtained.~~

- Process for logging ~~incidents~~ issues defined and accepted.

9.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA documentation along with additional relevant information identified during the test.

Objective: Documentation ***Test Technique: Document Review and Interview***	
Sub-Process	***Function***
M&R Documentation	~~CLEC ECTA End User Training and User Guide.~~
	~~CLEC Training Guide (M&R Sections).~~
	~~ETCA Help.~~
	~~Carrier Notifications.~~
	Joint Implementation Agreement (JIA) for Electronic Communications Trouble Administration (ECTA) Gateway for Local Service.

Figure VII-X: ECTA Documentation Evaluation Test Scope

9.5 Test Activities

1. Obtain relevant documentation needed to carry out business processes related to M&R.
2. Conduct documentation evaluation using documentation evaluation checklist.

3. ~~Conduct interviews with BellSouth documentation specialists.~~
4. ~~Conduct interviews with CLEC documentation users.~~
5. Log incidents noted during testing.
6. Compile results.
7. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.

9.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.

~~Exception report(s) completed.~~

- Summary evaluation report completed.
- Exit review completed.

10.0 M&R-10: M&R Process Evaluation

10.1 Description

This evaluation is comprised of two major elements. The first (Sub-Test 1) evaluates the functional equivalence of BellSouth's M&R processes for wholesale and retail trouble reports. Process flows for wholesale and retail trouble management will be reviewed and evaluated along with technician methods and procedures (M&P) and job aids for wholesale trouble repair.

The second element (Sub-Test 2) involves the execution and observation of selected M&R test scenarios to evaluate BellSouth's performance in making repairs under the conditions of various wholesale maintenance scenarios.

10.2 Objective

The objective of Sub-Test 1 is to evaluate the equivalence of BellSouth's end-to-end processes for retail and wholesale trouble reporting and repair. The objective of Sub-Test 2 is to evaluate BellSouth's performance in making repairs under the conditions of various wholesale maintenance scenarios.

10.3 Entrance Criteria

The entrance criteria for this test are presented by sub-test.

10.3.1 Entrance Criteria for Sub-Test 1

- Global Entrance Criteria satisfied
- Retail and Wholesale process flow documentation available.
- Retail and Wholesale Technician job aids (e.g. M&Ps) are available.

10.3.2 Entrance Criteria For Sub-Test 2

- Global Entrance Criteria satisfied.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.
- BellSouth test-bed and customer account data loaded and verified by Test Manager.
- Test scenarios selected and approved.
- Evaluation criteria, expected result files and test logs defined and approved.

10.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate the M&R process.

Objective: Process Evaluation ***Test Technique: Inspection, Interview and Transaction Processing***	
Sub-Process	***Function***
1. End-to-End M&R Process	Compare process flow and work support documentation for retail and wholesale.
2. End-to-End Trouble Report Processing	Observe and assess trouble report processing under various wholesale maintenance conditions using BellSouth test facilities.

Figure VII-XI: M&R Process Test Scope

10.5 Test Activities

The test activities for this test are presented by sub-test.

10.5.1 Test Activities Sub-Test 1

1. Identify and obtain all process and work support (e.g. M&Ps) documentation available for review.
2. Review documentation and identify differences between wholesale and retail processes.
3. Interview BST personnel to ascertain parity in M&R process between retail and wholesale.
4. Flag any exceptions and determine next steps in exception resolution process.
5. Document process analysis results.

10.5.2 Test Activities Sub-Test 2

1. Confirm that test bed facilities are operational and introduce faults as needed.
2. Conduct circuit test if applicable for each test scenario.
3. Log test results.
4. Create and submit trouble ticket via TAFI or ECTA.
5. Periodically monitor each trouble report throughout its life.
6. Log significant events in the trouble report life cycle (error occurrences, corrections, trouble ticket submission time, time cleared, etc.)
7. Calculate time to repair measurements for each test scenario fault repaired.
8. Document observations.
9. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
10. Generate test results report.

10.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.

- Test report generated.
- Exit review completed.